We claim:

1. A swaging tool, comprising:

a housing configured for a first swaging engagement member;

a piston rod configured to remain stationary with respect to the housing;

a piston configured to translate along the piston rod, the piston configured for a second swaging engagement member; and

an actuator configured to drive the piston along the piston rod such that the second engagement member moves toward the first engagement member.

2. The swaging tool of claim 1, wherein:

the housing defines an axial chamber;

the piston rod extends axially within the housing chamber; and

the piston has a piston inner guide surface conformingly receiving the piston rod such that the piston can translate in opposite axial directions, with respect to the housing, along the piston rod.

3. The swaging tool of claim 2, and further comprising a ram having a ram inner guide surface conformingly receiving the piston rod such that the ram can translate in opposite axial directions within the chamber, with respect to the housing, along the piston rod while adjoining the piston.

4. The swaging tool of claim 2, and further comprising:

a ram having a ram inner guide surface conformingly receiving the piston rod such that the ram can translate in opposite axial directions, with respect to the housing, along the piston rod while adjoining the piston;

wherein the housing defines a hydraulic port configured for injecting hydraulic fluid into the chamber adjacent the ram; and

wherein the housing is configured such that the injection of hydraulic fluid into the chamber via the port causes the ram to drive the piston axially along the piston rod to move the second engagement member toward the first engagement member.

5. The swaging tool of claim 4, and further comprising a spring compressed between a stop on the piston rod and the piston, wherein:

the piston is compressively held between the spring and the ram;

the piston rod is compressively biased to be stationary, with relation to the housing, by the spring; and

the spring becomes further compressed by the ram driving the piston axially along the piston rod.

6. The swaging tool of claim 4, wherein the ram is made of a bearing material.

7. A method of axially swaging a ring onto a fitting, comprising:

providing the swaging tool of claim 1;

positioning the ring adjoining a first member selected from the first swaging engagement member and the second swaging engagement member;

positioning the fitting adjoining a second and distinct member selected from the first swaging engagement member and the second swaging engagement member;

actuating the actuator such that the second engagement member moves toward the first engagement member to swage the ring on the fitting.

8. A swaging system for joining a member, the swaging system comprising:

the swaging tool of claim 1;

a fitting having a first sleeve configured for receiving the first member; and

a ring configured for axial movement over the sleeve to swage the sleeve to the member;

wherein each swaging engagement member is configured to engage at least one distinct member the group of the fitting and the ring.

9. The swaging system of claim 8, wherein:

the housing defines an axial chamber;

the piston rod extends axially within the housing chamber; and

the piston has a piston inner guide surface conformingly receiving the piston rod such that the piston can translate in opposite axial directions, with respect to the housing, along the piston rod.

10. The swaging system of claim 9, and further comprising a ram having a ram inner guide surface conformingly receiving the piston rod such that the ram can translate in opposite axial directions within the chamber, with respect to the housing, along the piston rod while adjoining the piston.

11. The swaging system of claim 9, and further comprising:

a ram having a ram inner guide surface conformingly receiving the piston rod such that the ram can translate in opposite axial directions, with respect to the housing, along the piston rod while adjoining the piston;

wherein the housing defines a hydraulic port configured for injecting hydraulic fluid into the chamber adjacent the ram; and

wherein the housing is configured such that the injection of hydraulic fluid into the chamber via the port causes the ram to drive the piston axially along the piston rod to move the second engagement member toward the first engagement member.

12. The swaging system of claim 11, and further comprising a spring compressed between a stop on the piston rod and the piston, wherein:

the piston is compressively held between the spring and the ram;

the piston rod is compressively biased to be stationary, with relation to the housing, by the spring; and

the spring becomes further compressed by the ram driving the piston axially along the piston rod.

13. The swaging system of claim 11, wherein the ram is made of a bearing material.

14. A swaging system for joining a first member to a second member, the swaging system comprising:

the swaging tool of claim 1;

a fitting having a first sleeve configured for receiving the first member and a second sleeve configured for receiving the second member;

a first ring configured for axial movement over the first sleeve to swage the first sleeve to the first member; and

a second ring configured for axial movement over the second sleeve to swage the second sleeve to the second member;

wherein the swaging engagement members are configured to engage the fitting and rings.

15. An axial swaging tool for making a tube connection formed by a fitting having a sleeve for receiving a tube and a swaging ring that is moved axially over the sleeve to apply a radial force to the sleeve that swages the sleeve to the tube, the swaging tool comprising:

a housing defining an axial chamber;

an axial piston rod extending axially within the housing chamber;

a piston having a piston inner guide surface defining a through-hole, the inner guide surface conformingly receiving and in sliding engagement with the piston rod

such that the piston can translate in opposite axial directions, with respect to the housing, along the piston rod;

a moveable ram adjoining the piston, the ram having a ram inner guide surface defining a bore, the ram inner surface conformingly receiving, and in sliding engagement with, the piston rod such that the ram can translate in opposite axial directions, with respect to the housing, along the piston rod, the ram being made of a bearing material;

a seal on the ram configured to hydraulically seal an axial portion of the housing chamber to form a sealed hydraulic chamber;

a first engagement member statically located on the housing, the first engagement member being configured for axially biasing a first member of a group consisting of the fitting and the swaging ring;

a second engagement member statically located on the piston, the second engagement member being configured for axially biasing a second, distinct member of the group consisting of the fitting and the swaging ring;

a spring, on the piston rod and within the housing chamber, compressed between an axial end of the piston rod and the piston;

wherein the piston rod end is compressively held stationary between the spring and a retainer ring affixed to an axial end of the housing;

wherein the piston is compressively held between the spring and the ram;

wherein the housing defines a hydraulic port configured for injecting hydraulic fluid into the hydraulic chamber;

wherein the housing is configured such that the injection of hydraulic fluid into the hydraulic chamber will cause the ram to drive the piston axially along the piston rod, against the force of the spring, to move the second engagement member toward the first engagement member.